

**Amendments To The Claims:**

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

**Listing of Claims:**

Claims 1-72. (Canceled)

73. (Currently Amended) A vector for heterologous expression of a gene cluster for spinosyn biosynthesis, comprising a DNA fragment larger than 40 kb wherein the DNA fragment comprises a nucleic acid comprising at least a part sequence selected from
- (a) ~~SEQ ID No. 1~~ SEQ. ID NO:1, and
- (b) ~~a sequence which is complementary to a sequence defined in (a), and~~
- (c) ~~a sequence which, due to the degeneracy of the genetic code, codes for the same amino acid sequences as a sequence defined in (a) or (b).~~
74. (Previously Presented) The vector of Claim 73, wherein the vector is comprised of a BAC vector, a PAC vector or a vector functionally equivalent to BAC or PAC vectors.
75. (Previously Presented) The vector of Claim 73, wherein the vector comprises a shuttle vector which can be transferred to prokaryotes and to eukaryotes.
76. (Previously Presented) The vector of Claim 73, wherein the vector comprises a shuttle vector which can be transferred to Gram-negative bacteria, Gram-positive bacteria and Archea.
77. (Previously Presented) The vector of Claim 73, wherein the vector comprises a shuttle vector which can be transferred to Escherichia coli and to actinomycetes.

78. (Previously Presented) The vector of Claim 73, wherein the vector comprises a shuttle vector which can be transferred to *Escherichia coli* and to *Streptomyces*.
79. (Previously Presented) The vector of Claim 73, wherein the vector can be replicated autonomously in a prokaryote.
80. (Previously Presented) The vector of Claim 73, wherein the vector can be integrated into the genome of a prokaryote via the phage  $\Phi$ C31 integration mechanism, the pSAM2 integration mechanism or the mini-circle integration mechanism.
81. (Previously Presented) The vector of Claim 73, wherein the vector can be integrated into the genome of a prokaryote by RecA-mediated recombination.
82. (Previously Presented) The vector of Claim 73, wherein the vector can be integrated into the genome of a prokaryote by RecE- and RecT-mediated recombination.
83. (Previously Presented) A host cell comprising the vector of Claim 73.
84. (Previously Presented) The host cell of Claim 83, wherein the host cell comprises a prokaryotic or eukaryotic cell.
85. (Previously Presented) The host cell of Claim 84, wherein the prokaryotic cell belongs to the group of actinomycetes.
86. (Previously Presented) The host cell of Claim 84, wherein the eukaryotic cell is a plant cell.
87. (Canceled)
88. (Previously Presented) The Vector of Claim 73, wherein the DNA fragment is larger than 60 kb.

89. (Previously Presented) The Vector of Claim 73 wherein the nucleic acid is functionally linked to regulatory sequences which ensure expression of the coding regions of the nucleic acid in prokaryotic or eukaryotic cells.

90. (Previously Presented) The Vector of Claim 74 selected from the BAC clones having the deposition numbers DSM 13010, DSM 13011 and DSM 13012.